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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,011	03/07/2001	Scotia Boelee	P1998J130	7872
7590 12/23/2003				
Exxonmobil Research & Engineering Company				
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Annandale, NJ 08801-0900				
		EXAMINER		
		LAZOR, MICHELLE A		
		ART UNIT		PAPER NUMBER
		1734		

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/600,011

Applicant(s)

BOELEE, SCOTIA

Examiner

Michelle A Lazor

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/67/01.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 16, 18, and 20/18 is/are rejected.
- 7) ☒ Claim(s) 7-15, 17, 19 and 20/18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
- 1. ☒ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 16, and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There are not any units disclosed for either the foaming ability or for the cloud point. For the purposes of examination, the foaming ability will be assumed to be in (mL) and the cloud point will be assumed to be in (°C), according to DIN 53902 and DIN 53917, respectively.

Claim Objections

3. Claims 7 – 15, 17, 19, and 20/19 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 – 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Claret et al. (U.S. Patent No. 5695553) in view of Sucech et al. (U.S. Patent No. 5683635) and Strecker et al. (U.S. Patent No. 5766612).

Claret et al. disclose a process comprising a slurry of gypsum formed in water (column 1, lines 11 – 18) which is foamed (column 4, lines 11 – 19), in which a hydrophobing agent comprising an emulsion of a mixture of a petroleum derived hydrocarbon wax and montan wax in an aqueous continuous phase containing an emulsifier system added to the slurry (column 2, lines 6 – 37), and is characterized in that the emulsifier system comprises: i) a nonionic surfactant (column 3, lines 41 – 49) and ii) an anionic dispersant which is a sulphated compound (column 3, lines 50 – 59); but do not disclose the slurry introduced to a continuous process mould means and involves pouring of the slurry onto a continuously moving belt; and the nonionic surfactant to be characterized by a foaming ability of at least 300 mL and a cloud point of at least 50°C. However, Sucech et al. disclose the slurry introduced to a continuous process mould means and involves pouring of the slurry onto what is considered a continuously moving belt (column 1, lines 48 – 64), and Strecker et al. disclose the nonionic surfactant to be characterized by a foaming ability of at least 300 mL and a cloud point of at least 50°C (Abstract; column 6, Table 1). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use Sucech et al.'s continuous process to speed up the production process, and it would have been obvious to use Strecker et al.'s nonionic surfactant to be characterized by a foaming ability of at least 300 mL and a cloud point of at least 50°C with Claret et al.'s process of making gypsum board because doing so would permit an increase in the amount of board produced and produce a waterproof board with enhanced properties.

6. Claims 4 – 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Claret et al., Sucech et al., and Strecker et al. as applied in Claim 1, in view of Cooper et al. (U.S. Patent No. 4003867).

Claret et al., Sucech et al., and Strecker et al. disclose all the limitations of Claim 1, but do not disclose the anionic dispersant to be a naphthalene sulphonate. However, Cooper et al. disclose using naphthalene sulphonate as a dispersant (column 3, line 55 – column 4, line 6). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use, specifically Cooper et al.'s naphthalene sulphonate, as an equivalent alternative to the generic, sulphated compound such as the sodium salt of a lignosulfonic acid (column 4, lines 2 – 6) as disclosed by Claret et al. since the naphthalene sulphate is an art recognized equivalent of the sulphur compounds.

7. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Claret et al. in view of Strecker et al.

Claret et al. disclose a process comprising an emulsion of a mixture of a petroleum derived hydrocarbon wax and montan wax in an aqueous continuous phase containing an emulsifier system added to the slurry (column 2, lines 6 – 37), and is characterized in that the emulsifier system comprises: i) a nonionic surfactant (column 3, lines 41 – 49) and ii) an anionic dispersant which is a sulphated compound (column 3, lines 50 – 59); but do not disclose the nonionic surfactant to be characterized by a foaming ability of at least 300 mL and a cloud point of at least 50°C. However, Strecker et al. disclose the nonionic surfactant to be characterized by a foaming ability of at least 300 mL and a cloud point of at least 50°C (Abstract; column 6, Table 1). Therefore it would have been obvious to one of ordinary skill in the art at the time of

the invention to use Strecker et al.'s nonionic surfactant to be characterized by a foaming ability of at least 300 mL and a cloud point of at least 50°C with Claret et al.'s composition to provide a gypsum board with enhanced waterproof characteristics.

8. Claim 20¹⁸ is rejected under 35 U.S.C. 103(a) as being unpatentable over Claret et al. and Strecker et al. as applied in Claim 18 above, in view of Hereth et al. (U.S. Patent No. 4315957).

Claret et al. and Strecker et al. disclose all the limitations of Claim 18, including a method in which the montan wax is used in an amount in the range 10 – 20% by weight of the emulsion, and the emulsifier system is used in an amount in the range 0.5 – 6% by weight, preferably 1 – 2.5% by weight of the emulsion (Claret et al.: column 2, lines 14 – 33), but do not specifically disclose the hydrocarbon wax is used in an amount in the range 20 – 40% by weight of the emulsion. However, Hereth et al. disclose using the hydrocarbon wax is used in an amount in the range 20 – 40% by weight of the emulsion (column 3, lines 2 – 5). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use Hereth et al.'s amount of hydrocarbon wax in the modified method of Claret et al. and Strecker et al. to provide a gypsum board with enhanced waterproof characteristics.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fabry discloses nonionic surfactants characterized by a foaming ability of at least 300 mL (column 7, Table 1; column 8, lines 8 – 11).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle A Lazor whose telephone number is 571-272-1232.

The examiner can normally be reached on Mon - Thurs 6:30 - 4:00, Fridays 6:30 - 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



MAL
12/15/03



MICHAEL COLAIANNI
PRIMARY EXAMINER